

Remarks

Status of the Claims

Claims 1-23 were pending in the application. All claims stand rejected. By this paper, claims 1, 9, 10, 12, 13, 15, and 23 have been amended, and claims 3-6, 18, 19, and 22 have been canceled without prejudice or disclaimer. For the reasons set forth below, Applicant submits that each of the pending claims is patentably distinct from the cited prior art and in condition for allowance. Reconsideration of the claims is therefore respectfully requested.

Claim Rejections - 35 U.S.C. § 103

Claims 1, 2, 7-21, and 23 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over International Application Publication No. WO 00/45884 by Eckerbom et al. ("Eckerbom '884) in view of International Application Publication No. WO 03/017837 by Eckerbom et al. ("Eckerbom '837). This rejection is respectfully traversed. As set forth below, Applicant respectfully submits that each of the pending claims, as amended herein, is patentably distinct from the cited references, individually and collectively.

Regarding independent claims 1 and 12, Eckerbom '884 and Eckerbom '837 fail to teach or suggest an arrangement that provides liquid-free gas to a fuel cell **after** analysis of the liquid-free gas by the analysing instrument. As shown in FIG. 1 of the present application (reproduced below), the claimed arrangement includes a holder unit 6 for a removably fitted water trap 4 that provides liquid-free gas to an analysing unit 8 through a first tube 10. After analysis of the liquid-free gas by the analysing unit 8, the

analysing unit 8 provides the liquid-free gas to the oxygen gas measuring unit 14, which comprises a fuel cell.

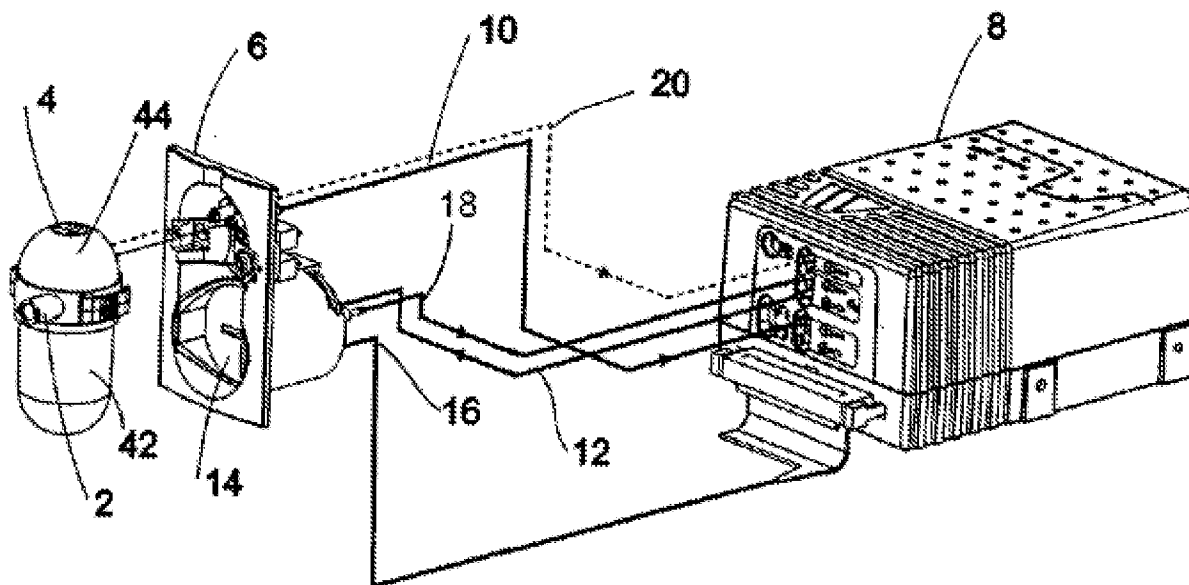


FIG. 1 of Present Application

In the embodiment shown in FIG. 1, this arrangement reduces turbulent flow and increases the analysis provided by the analysing unit 8. As stated in the current specification:

Different gases have different rise times. In the tubing system, every abrupt alteration of area, every curve and bend may cause turbulent flow, thus spreading out the gas wave front adversely affecting said rise times and for this reason, one wishes to measure the content of the gas with the most critical rise time as soon as possible in the tubing system. In this instance, said gas is usually carbon dioxide and ***therefore the measuring of carbon dioxide, as well as of other gas components of the liquid-free gas sample, not including oxygen gas, takes place first and the measuring of the oxygen content of the gas sample takes place at the end of the tubing system.***

Page 9, lines 19-28. (Emphasis added). Further, by using an arrangement wherein the oxygen measuring unit 14 is external to the analysing unit 8, such as depicted in FIGS. 1 and 2 of the present application, and as provided in independent claim 1, a fuel cell

with a short rise time could be used as the oxygen measuring unit. Short response rise time is when monitoring infant patients (page 2, lines 14-20). However, a fuel cell having a short response time typically has a substantially shorter life-time than a fuel cell with a longer response time. Since an external oxygen measuring unit, however, could easily be replaced, short response time fuel cells can now readily be used in the claimed arrangement. As pointed out above, this may be useful for monitoring infant patients.

Applicant respectfully submits that Eckerbom '884 and Eckerbom '837, either individually or when combined, do not provide the specifically claimed arrangement that reduces turbulent flow and increases accuracy by measuring gases, other than oxygen, before using a fuel cell to measure the oxygen content. Pages 2 and 3 of the Office Action state that Eckerbom '884 "does not expressly disclose the employment of a fuel cell (oxygen gas measuring unit) removably attached to the holder unit having a connection adapted to receive the liquid-free gas." Eckerbom '837 also fails to teach or suggest the limitations of amended claims 1 and 12. As shown in FIG. 1 of Eckerbom '837 (reproduced below), a central portion 5 of an adapter 1 accommodates a measuring head 2. The measuring head 2 includes a light transmitter and receiver 10 that sends light through a window 7 in the central portion 5 of the adapter 1 to measure gases. See, *e.g.*, page 5, lines 15-24. The measuring head 2 also includes a fuel cell 18 that receives gas through a connection 16 in the same central portion 5 to measure oxygen gas content.

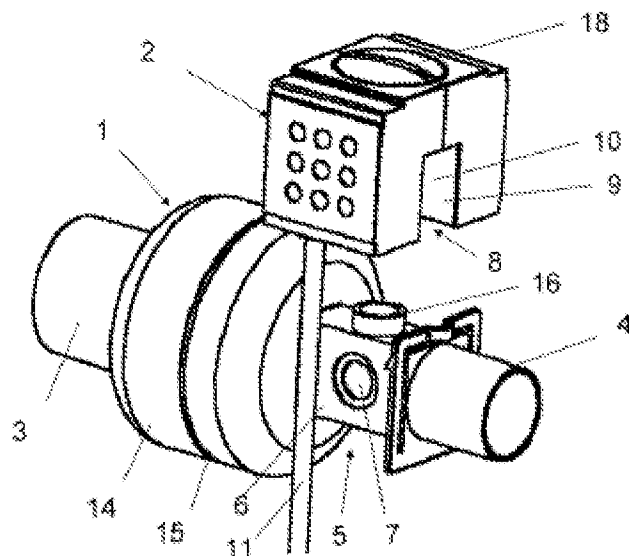


FIG. 1 of Eckerbom '837

Unlike amended claims 1 and 12, however, the apparatus of Eckerbom '837 makes no teaching or suggestion as to which gas is measured first. Further, the alignment of the window 7 and the connection 16 in the central portion 5 of the adapter 1 make it impossible to determine whether the fuel cell 18 receives the gas after analysis of the gas by the light transmitter and receiver 10. If anything, the flow of gas is split such that all gas measurements are made at the same time. As shown in FIG. 3 of Eckerbom '837, a flow directing means 21 guides part of the gases towards the fuel cell 18 as the remainder of the gases continue along the path through an internal channel 20 of the central portion 5. Applicants respectfully submit that such flow directing means 21 may create a turbulent flow that may reduce the accuracy of the measurement produced by the light transmitter and receiver 10. Further, it cannot be said that the fuel cell 18 of Eckerbom '837 receives the gas from an analysing instrument via a holder unit. Accordingly, Applicant respectfully requests that the rejection of claims 1 and 12, as amended herein, be withdrawn.

Further, the pending dependent claims, which depend either directly or indirectly from independent claims 1 or 12, respectively, are also allowable for at least the same reasons discussed above with respect to claims 1 and 12. Further, the independent claims are allowable for the additional limitations recited therein.

For example, Eckerbom '884 and Eckerbom '837 fail to teach or suggest a fuel cell that ***communicates information about oxygen gas content*** in the liquid-free gas to a separate analysing instrument, as required by claim 7. The Office Action has failed to indicate where this limitation is taught in the prior art. Accordingly, Applicant respectfully requests that the rejection of claim 7 be withdrawn.

As another example, Eckerbom '884 and Eckerbom '837 do not teach or suggest the limitations of amended claim 9, which recites:

9. An arrangement according to claim 8, wherein said holder unit has a ***first indentation*** adapted to house the water trap and a ***second indentation*** adapted to house the fuel cell behind the water trap, so that said holder unit ***holds the fuel cell between the water trap and the analysing instrument***.

(Emphasis added). Similar limitations are included in claim 23.

As shown in FIG. 3 of the present application, the holder 6 includes a first indentation 22 that houses the water trap 4 and a second indentation 32 that houses the fuel cell 14 behind the water trap 4. Thus, as shown in FIG. 1 of the present application, the holder 6 holds the fuel cell 14 between the water trap 4 and the analysing instrument 8. Applicant respectfully submits that Eckerbom '884 and Eckerbom '837 are completely silent as to the subject matter of claim 9. While Eckerbom '884 includes a holder with an indentation for a water trap, the holder in Eckerbom '884 does not include a second indentation to house a fuel cell. Accordingly, Applicant respectfully requests that the rejection of claims 9 and 23 be withdrawn.

Similarly, because Eckerbom '884 and Eckerbom '837 do not teach or suggest the claimed second indentation, these references also fail to teach or suggest an interlocking means in the second indentation, as recited in claims 10 and 11. Accordingly, Applicant respectfully requests that the rejection of claims 10 and 11 be withdrawn.

Conclusion

For at least the foregoing reasons, the cited prior art references, whether considered individually or in combination, fail to disclose each of the limitations in any of the pending independent claims. For at least the same reasons, each of the claims depending therefrom are also patentably distinct from the cited prior art.

In view of the foregoing, all pending claims represent patentable subject matter. A Notice of Allowance is respectfully requested.

Respectfully submitted,

By /Kory D. Christensen/
Kory D. Christensen
Registration No. 43,548

STOEL RIVES LLP
One Utah Center Suite 1100
201 S Main Street
Salt Lake City, UT 84111-4904
Telephone: (801) 328-3131
Facsimile: (801) 578-6999